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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/384,419 08/27/99 BANK

G 85874/136

EXAMINER

WM01/0905

FOLEY & LARDNER
3000 K STREET N W SUITE 500
P O BOX 25696
WASHINGTON DC 20007-8696

NI, S

ART UNIT

PAPER NUMBER

2643

DATE MAILED:

09/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/384,419

Applicant(s)

BANK ET AL.

Examiner

Suhan Ni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-27 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-21,24-27 and 33 is/are rejected.
- 7) ☒ Claim(s) 22-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is responsive to the applicant's amendment dated 06/18/2001.

Claim Objections

2. Claims 28-32 are objected to because of the following informalities:

Claims 28-32 have been drawn to non-elected inventions and have been withdrawn from further consideration (see page 7, lines 5-6 of applicants' reply filed 06/18/2001).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1, 3-13, 17-21, 24-27 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kishi (US-4,654,554).

Regarding claim 1, Kishi discloses a panel-form loudspeaker comprising: a resonant panel-form member (30) and a vibration exciting system (10) on the panel-form member (Fig. 11a) and adapted to apply bending wave energy thereto to cause the panel-form member to produce an acoustic output, wherein the vibration exciting system is adapted to apply torsion to the panel-form member (Fig. 11) as claimed.

Regarding claims 3-4 and 33, Kishi further discloses the panel-form loudspeaker, wherein the vibration exciting system is adapted to the resonant panel for applying torsion and shear thereto (Figs. 11a, 11b), and said vibration exciting system is coupled to the panel to span a plurality of nodal lines in the panel.

Regarding claims 5-6, Kishi further discloses the panel-form loudspeaker, wherein the vibration exciting system comprises a suspension (102) on which the panel is mounted.

Regarding claims 7-8, 10-13 and 24-27, Kishi further discloses the panel-form loudspeaker, that the vibration exciting system comprises a piezoelectric device (2) attached to a face of the panel (101).

Regarding claims 9 and 20-21, Kishi further discloses the panel-form loudspeaker, that said piezoelectric device is a mirror-imaged piezoelectric devices attached to opposite faces of the panel (Fig. 12, 33, 34, 36).

Regarding claims 17-19, Kishi further discloses that, the vibration exciting system comprises an inertial device, which has an inertial mass (8, 104) and is an inertial vibration exciter (10).

4. Claims 1, 3-8, 10-13, 17-19, 24-27 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Azima et al. (US-6,031,926).

Regarding claim 1, Azima discloses a panel-form loudspeaker (81) comprising: a resonant panel-form member (2) and a vibration exciting system (9) on the panel-form member and adapted to apply bending wave energy thereto to cause the panel-form member to produce an acoustic output, wherein the vibration exciting system is adapted to apply torsion to the panel-form member (Fig. 1) as claimed.

Regarding claims 3-4 and 33, Azima further discloses the panel-form loudspeaker, wherein the vibration exciting system is adapted to the resonant panel for applying torsion and shear thereto (Fig. 3), and said vibration exciting system is coupled to the panel to span a plurality of nodal lines in the panel (Figs. 3-7).

Regarding claims 5-6, Azima further discloses the panel-form loudspeaker, wherein the vibration exciting system comprises a suspension (3) on which the panel is mounted.

Regarding claims 7-8, 10-13 and 24-27, Azima further discloses the panel-form loudspeaker, that the vibration exciting system comprises a piezoelectric device attached to a face of the panel (Fig. 7).

Regarding claims 17-19, Azima further discloses that, the vibration exciting system comprises an inertial device (9), which has an inertial mass (9) and is an inertial vibration exciter (9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al. (US-6,031,926) in view of Kumada et al. (US-4,352,961).

Regarding claims 14-16, Azima discloses that the panel of the panel-form loudspeaker

is made of plastic material (Col. 3, line 29 to Col. 4, line 12). But Azima does not clearly show that the panel-form loudspeaker is transparent as claimed. Kumada discloses a transparent flat panel piezoelectric speaker (Fig. 6), comprising a transparent panel (5), a transparent piezoelectric ceramics (13). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide the transparent panel and the transparent piezoelectric ceramics taught by Kumada, for the panel-form loudspeaker as an alternate choice, for providing a transparent visual effect for a desirable application.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claim 1 is are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all claims of U.S. Patent Application 08/707,012, now allowed U.S. Patent (under publication processing, U.S. Patent No. unknown at this time). Although the conflicting claims are not identical, they are not patentably distinct from each other because all claims of allowed U.S. Patent Application 08/707,012 are similar in scope to at least claim 1 of the US patent application 09/384,419 with obvious wording variations.

Allowable Subject Matter

7. Claims 22-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

8. Applicants' arguments dated 06/18/2001 have been fully considered, but they are not deemed to be persuasive.

Regarding claims rejected under 35 U.S.C. 102(b) as being anticipated by Kishi (US-4,654,554), the cited reference does clearly show a panel-form loudspeaker comprising: a resonant panel-form member (30) and a vibration exciting system (10) on the panel-form member (Fig. 11a) and adapted to apply bending wave energy thereto to cause the panel-form member to produce an acoustic output, wherein the vibration exciting system is adapted to apply torsion to the panel-form member (Fig. 11) as claimed. Moreover, since the radiator 30 (Fig. 11) is formed of a semi-hard, foamed flat plate (col. 8, lines 1-19), which can not be excited on its own and only can be vibrated by a vibration exciting system (10). In order to vibrate the plate 30,

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the vibration exciting system (10) drives the plate for vibration, and clearly, the exciting system applies torsion on the plate for generating acoustic sound. Furthermore, since the exciting system is not mounted on a geometric center of the plate (Fig. 11b) and the distances between the exciting system to each side of the plate are varying, it is maximizing the torsion applied to the plate by the exciting system.

Regarding claims rejected under 35 U.S.C. 102(e) as being anticipated by Azima et al. (US-6,031,926), the cited reference does clearly show a panel-form loudspeaker (81) comprising: a resonant panel-form member (2) and a vibration exciting system (9) on the panel-form member and adapted to apply bending wave energy thereto to cause the panel-form member to produce an acoustic output, wherein the vibration exciting system is adapted to apply torsion to the panel-form member (Fig. 1) as claimed. Moreover, since the radiator (2) is formed of a foam plate with suspension (3) surround (Fig. 1), which can not be excited on its own and only can be vibrated by the vibration exciting system (9). In order to vibrate the plate 2, the vibration exciting system (9) drives the plate for vibration, and clearly, the exciting system applies a bending force on the plate for generating acoustic sound. Furthermore, since the exciting system is not mounted on a geometric center of the plate (Figs. 1, 3-6) and the distances between the exciting system to each side of the plate are varying, it maximizes the torsion applied to the plate by the exciting system.

Regarding the double patenting rejection, the rejection still clearly stands based on an allowed U.S. Patent Application, or an U.S. Patent to the application.

Conclusion

9. **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

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A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

10. Any response to this final action should be mailed to:

**Commissioner of Patents and Trademarks
Washington, D.C. 20231**

Or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE"), or

(703) 305-9508, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

**Receptionist, Sixth Floor,
Crystal Park II,
2121 Crystal Drive,
Arlington, Virginia 22202**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(703)-308-9322**, and the number for fax machine is **(703)-305-9508**. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at **(703) 305-4708**.

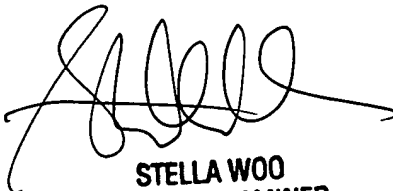
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(703) 305-3900**.

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SN

September 3, 2001



STELLA WOO
PRIMARY EXAMINER